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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,099	09/26/2005	Michael Stuart Waite	920670-98995	1985
23644 7590 05/27/2008 BARNES & THORNBURG LLP P.O. BOX 2786 CHICAGO, IL 60690-2786				
EXAMINER				
SMITH, FRANCIS P				
ART UNIT		PAPER NUMBER		
1792				
NOTIFICATION DATE		DELIVERY MODE		
05/27/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patent-ch@btlaw.com

Office Action Summary

Application No.

10/529,099

Applicant(s)

WAITE ET AL.

Examiner

Francis P. Smith

Art Unit

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-55 and 57-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-55 and 57-62 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

- I. The overall purpose of the layer:
 - A. A method of creating an insulating layer.
 - B. A method of creating an etch stop layer.
 - C. A method of creating a barrier layer.
 - D. A method of creating an optically emissive layer.
 - E. A method of creating a conductive layer.

If A is chosen, select one from:

- a. silica sol
- b. polysiloxanes
- c. silsequioxane polymers
- d. —chloroethylsilsequioxane
- e. hydrogensilsequioxane
- f. acetoxysilsequioxane
- g. H_3BO_3

If B is chosen, select from:

Art Unit: 1792

- a. $\text{Cr}(\text{NO}_3)_3 \cdot 9\text{H}_2\text{O}$

If C is chosen, select one from:

- a. silica sol
- b. alumina sols
- c. titania sola
- d. alumina sol plus a soluble phosphate
- e. alumina sol plus a soluble organophosphate
- f. polysiloxanes
- g. silsequioxane polymers
- h. $\text{—chloroethylsilsequioxane}$
- i. hydrogensilsequioxane
- j. acetoxysilsequioxane

If D is chosen, select one from:

- a. soluble silica precursor comprising an oxide sol
- b. organometallic complex

If E is chosen, select one from:

- a. $\text{La}(\text{NO}_3)_3 \cdot 6\text{H}_2\text{O}$
- b. $\text{Sr}(\text{NO}_3)_2 \cdot 2\text{H}_2\text{O}$
- c. $\text{Co}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$
- d. $\text{Al}(\text{NO}_3)_3 \cdot 9\text{H}_2\text{O}$
- e. $\text{Co}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$
- f. $\text{Ni}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$

Art Unit: 1792

g. $\text{In}(\text{NO}_3)_3 \cdot 6\text{H}_2\text{O}$

h. $\text{Fe}(\text{NO}_3)_3 \cdot 6\text{H}_2\text{O}$

i. AgNO_3

II. The ink contains one further additive:

A. anti-foaming agent

B. leveling agent

C. wetting agent

D. preservative

E. air-release agent

F. retarder

G. dispersing agent

H. thickening agent

If A is elected, select one from:

a. butyl cellosolve

b. n-octanol

c. emulsions of organic polymers and organic metal-compounds

d. silicone-free defoaming substances in alkylbenzene

e. silicone

If B is elected, select one from:

a. poly(vinyl) alcohol

b. fluorocarbon modified polyacrylate in sec. butanol

Art Unit: 1792

c. organically modified polysiloxane in isobutanol

d. solvent-free modified polysiloxane

If C is elected, select one from:

a. unsaturated polyamide and acid ester salt in xylene, n-butanol and monpropyleneglycol

b. alkylol ammonium salt of a high molecular weight carboxylic acid in water

If D is elected, select one from:

a. phenols

b. formaldehydes

If E is elected, select one from:

a. silica particles

b. silicones

If F is elected, select one from:

a. 1,2-propanediol

b. terpeneol

If G is elected, select one from:

a. poly(vinyl) alcohol

b. modified polyurethane in butylacetate, methoxypropylacetate and sec. butanol

c. modified polyacrylate in methoxypropanol

d. polyethylene glycol mono(4-(1,1,3,3-tetramethylbutyl)phenyl)ether

Art Unit: 1792

e. mineral oil

f. silicone oil

If H is elected, select one from:

a. poly(vinyl) alcohol

b. ethyl cellulose

c. hydroxyethyl cellulose

d. carboxymethyl cellulose

e. methylhydroxypropyl cellulose

f. hydroxypropyl cellulose

g. xanthan gum

h. guar gum

i. fumed silica

j. laponite

III. The coating step is selected from:

A. screen printing

B. ink-jet printing

C. offset lithography

D. pad printing

E. table coating

F. slot printing

IV. The thin film is incorporated in:

- A. optical device
- B. sensing device
- C. field emission device
- D. plasma reactor
- E. corona discharge device
- F. silent discharge device
- G. ozoniser
- H. electron source
- I. electron gun
- J. electron device
- K. x-ray tube
- L. vacuum guage
- M. gas filled device
- N. ion thruster

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims

subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

2. The claims are deemed to correspond to the species listed above in the following manner:

The following claim(s) are generic: 6.

3. The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: Species 1 contains a common theme creating a material in a thin-film structure. US 2002/0146853 A1 (herein after referred to as '853) discloses that it was known at the time of the invention to thin-film material (see abstract). Species 2 contains a common theme of the use of additional additives. US 6,517,911 B1 ('911) teaches that the use of additional additives in the process for forming an electrically insulating film was known at time of the invention (col. 5, lines 13-29). Species 3 contains a common theme of coating methods. '911 discloses that it was known at the time of the invention that various coating methods may be employed to deposit an electrically insulating film (col. 6, lines 25-35). Species 4 contains of common theme of utilizing the thin film in a device. '911

teaches that it was known at the time of the invention to utilize thin films in devices (see abstract), and therefore, the instant application lacks unity.

4. A telephone call was not made request an oral election to the above restriction requirement do to the complexity of the restriction.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Francis P. Smith whose telephone number is (571) 270-3717. The examiner can normally be reached on Monday through Thursday 7:00 AM-5:00 PM.

Art Unit: 1792

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on (571)272-1418 . The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FPS

/Michael Cleveland/
Supervisory Patent Examiner, Art Unit 1792